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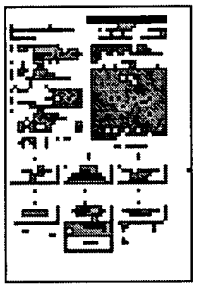
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Abstract:

PROBLEM TO BE SOLVED: To provide an electrolyte with low heat generation speed and high safety by constituting with a nonaqueous solvent containing fluorine-containing cyanoethyl ether compound and an electrolyte.

SOLUTION: A nonaqueous electrolyte contains fluorine-containing cyanoethyl ether compound represented by the formula: X-(OR)n-OCH2CH2-CN. In the formula, X shows 1-10C fluorine atom substituted hydrocarbon group, R shows 2-4C alkylene group, and (n) is 0-30. The nonaqueous solvent preferably contains cyclic carbonate and/or chain carbonate, the cyclic carbonate is a compound containing 2-5C alkylene group, and the chain carbonate is a compound containing 1-5C hydrocarbon group. An electrolyte is selected from LiPF6, LiBF6, and LiOSO2R1. R1 shows 1-6C perfluoroalkyl group. A negative electrode containing metallic lithium, a lithium-containing alloy, and a carbon material capable of doping/undoping lithium ions as a negative active material is used.

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